

RF Exposure Report

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FCC ID: 2ALJ3AP211H

Test Model: AP211H

Received Date: Apr. 25, 2018

Test Date: May 4 ~ Jun. 27, 2018

Issued Date: Jul. 5, 2018

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Release Control Record

Issue No.	Description	Date Issued
SA180425D01	Original release.	Jul. 5, 2018

1 Certificate of Conformity

Product: HAN Access Point

Brand: HAN

Test Model: AP211H

Sample Status: Engineering sample

Applicant: HAN Networks Co., Ltd.

Test Date: May 4 ~ Jun. 27, 2018

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

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Date:

Jul. 5, 2018

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Approved by :

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Date:

Jul. 5, 2018

Rex Lai / Associate Technical Manager

2 RF Exposure

2.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 25cm away from the body of the user.

So, this device is classified as **Mobile Device**.

2.4 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	25.57	7.01	25	0.2306	1
5180-5240	25.91	9.31	25	0.4236	1
5745-5825	26.21	9.31	25	0.4538	1

NOTE:

2.4GHz Directional gain = 4dBi + 10log(2) = 7.01dBi

5.0GHz Directional gain = 6.3dBi + 10log(2) = 9.31dBi

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.2306 + 0.4538 = 0.6845

Therefore the maximum calculations of above situations are less than the “1” limit.

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